Snow Surveyors Climbing to a Snow Course

FEDERAL-STATE COOPERATIVE SNOW SURVEYS AND IRRIGATION WATER FORECASTS

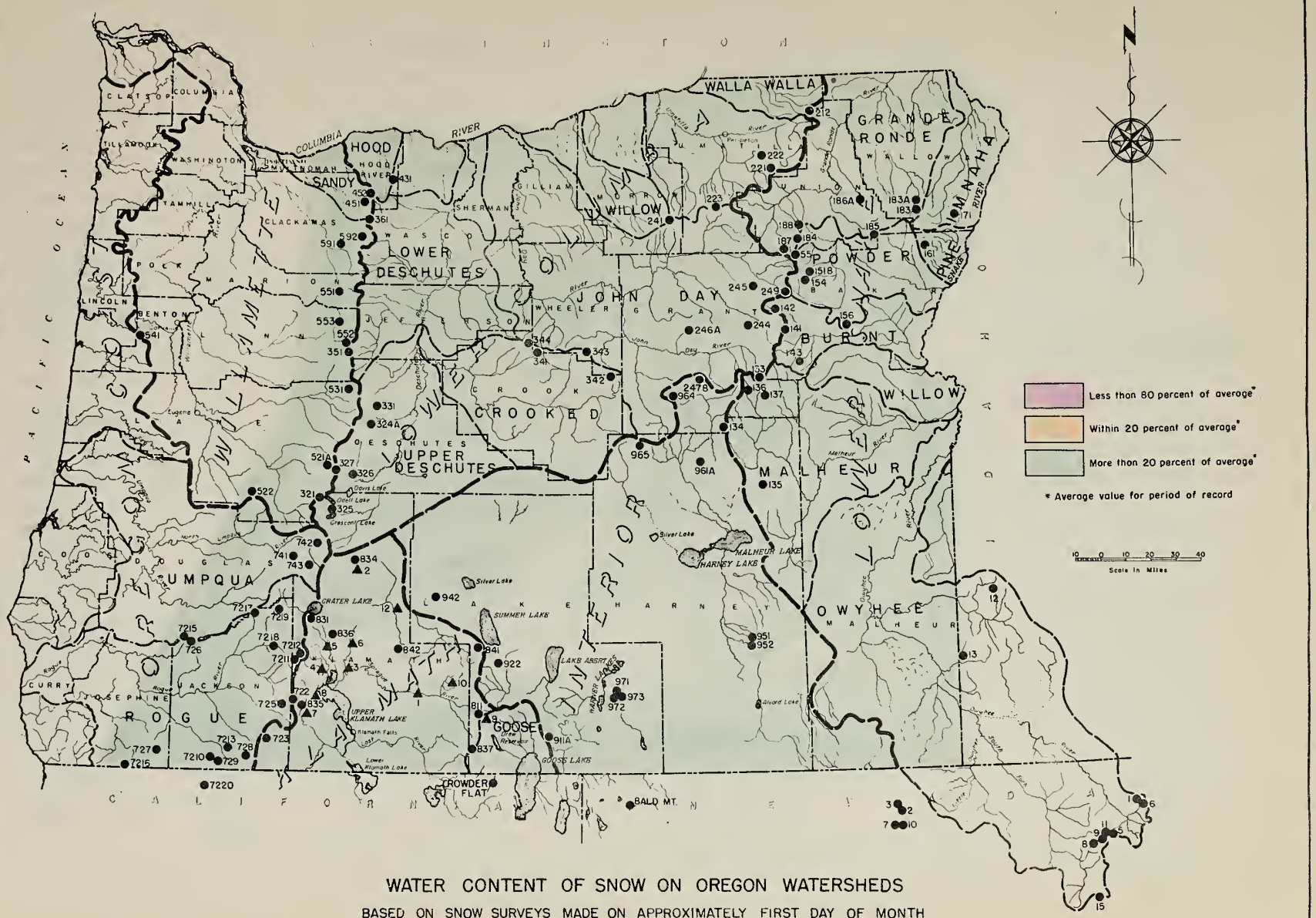
FOR OREGON

FEBRUARY 1, 1946

By

Division of Irrigation, Soil Conservation Service
United States Department of Agriculture
and
Oregon Agricultural Experiment Station

Data included in this report were obtained by the agencies named above in cooperation with the Oregon State Engineer, U. S. Forest Service, National Park Service and other Federal, State and local organizations.



WATER CONTENT OF SNOW ON OREGON WATERSHEDS

BASED ON SNOW SURVEYS MADE ON APPROXIMATELY FIRST DAY OF MONTH

(Valley Lands Not Necessarily Included)

INDEX TO SNOW COURSES

Number	Name	Elev.
	UPPER COLUMBIA DRAINAGE Lower Snake in Oregon	
	OWYHEE RIVER	
Nev.1	Big Bend	6800
Nev.2	Buckskin, Lower	6800
Nev.3	Buckskin, Upper	8200
952	Fish Creek	7900
Nev.5	Fry Canyon	6800
Nev.6	Gold Creek Ranger Ste.	6600
Nev.7	Granite Peak	8600
Nev.8	Jack Creek, Lower	7000
Nev.9	Jack Creek, Upper	7800
Nev.10	Martin Creek	7000
Nev.11	Rodeo Flat	7000
Ida.12	Silver City	6400
951	Silvies	6900
Ida.13	South Mountain No. 2	6340
Nev.15	Taylor Canyon	5200
	MALHEUR RIVER	
133	Blue Mountain Spring	5900
137	Crane Prairie	5375
136	Lake Creek	5120
134	Rock Spring	5100
135	Stinking Water	4800
	BURNT RIVER	
143	Barney Creek	5950
141	Blue Mountain Summit	5098
156	Dooley Mountain	5430
142	Tipton	5100
	POWDER RIVER	
155	Anthony Lake	7125
154	Bourne	5800
156	Dooley Mountain	5430
151B	Eilertson Meadows	5400
249	Gold Center	5340
184	Summit Springs	6000
185	Taylor Green	5740
	PINE CREEK	
161	Schneider Meadows	5400
	IMNAHA RIVER	
171	Coverdale	4250
	GRANDE RONDE RIVER	
183	Aneroid Lake	7480
183A	Aneroid Lake No. 2	7000
155	Anthony Lake	7125
188	Beever Reservoir	5340
187	Camp Carson	5970
186A	Moss Spring	5850
184	Summit Springs	6000
185	Taylor Green	5740
212	Tollgate	5070

Number	Name	Elev.
	LOWER COLUMBIA DRAINAGE	
	WALLA WALLA RIVER	
212	Tollgate	5070
	UMATILLA RIVER	
222	Emigrant Springs	3925
223	Lucky Strike	5050
221	Meacham	4300
212	Tollgate	5070
	WILLOW CREEK	
241	Arbuckle Mountain	5400
	JOHN DAY RIVER	
241	Arbuckle Mountain	5400
246A	Beech Creek Summit	4800
133	Blue Mountain Spring	5900
141	Blue Mountain Summit	5098
244	Dixie Springs	6650
249	Gold Center	5340
964	Izee Summit	5293
245	Olive Lake	6000
965	Snow Mountain	6300
247B	Starr Ridge	5150
	DESCHUTES RIVER	
326	Caldwell Ranch	4400
321	Cascade Summit	4880
327	Charlton Lake	5750
361	Clear Lake	3500
325	Crescent Lake	4760
343	Derr	5670
351	Hogg Pass	4755
344	Marks Creek	4540
324A	New Dutchman Flat	6400
341	Ochoco Meadows	5200
965	Snow Mountain	6300
342	Tamarack	4800
331	Three Creeks Meadows	5600
	HOOD RIVER	
431	Brooks Meedows	4300
	SANDY RIVER	
361	Clear Lake	3500
452	Phlox Point - Mt. Hood	5600
451	Still Creek	3700
	CLACKAMAS RIVER	
592	Cleckamas Lake	3400
591	Peavine Ridge	3500

Number	Name	Elev.
	WILLAMETTE RIVER	
551	Breitenbush	2325
321	Cascade Summit	4880
522	Champion	4500
327	Charlton Lake	5750
351	Hogg Pass	4755
531	McKenzie	4800
553	Marion Forks	2730
541	Mary's Peak	3620
552	Santiam Junction	3990
521A	Waldo Lake	5500
	KLAMATH LAKE BASIN	
831	Annie Spring	6018
722	Billie Creek Divide	6000
834	Chemult No. 1	4760
Calif.	Crowder Flat	5200
723	Hyatt Prairie Reservoir	4900
835	Lake of the Woods No. 1	4960
811	Quartz Mountain	5320
7211	Seven Lakes No. 1	6800
7212	Seven Lakes No. 2	6200
837	Strewberry	5600
841	Summer Rim	7200
836	Sun Mountain	5350
842	Taylor Butte	5100
	GOOSE LAKE BASIN	
911A	Camas Creek	5720
811	Quartz Mountain	5320
837	Strewberry	5600

INDEX TO THE CALIFORNIA OREGON POWER COMPANY SNOW WATER STATIONS

	KLAMATH LAKE BASIN	
1	Beatty	4300
2	Chemult	4761
3	Chiloquin	4187
4	Crystel	4200
5	Fort Klamath	4150
6	Kirk	4533
7	Lake of the Woods	4960
8	Pelicen	4200
9	Quartz Mountain	5504
10	Richardson Ranch	4800
12	Yamsey	4600
	GOOSE LAKE BASIN	
9	Quartz Mountain	5504

Number	Name	Elev.
	INTERIOR DRAINAGE	
	SILVER LAKE	
942	Silver Creek	4900
	CHEWAUCAN RIVER	
922	Mill Creek	6200
	HARNEY BASIN	
973	Deer Creek	6670
952	Fish Creek	7900
971	Hart Mountain	6350
961A	Idylwild Park	5200
964	Izee Summit	5293
134	Rock Spring	5100
951	Silvies	6900
965	Snow Mountain	6300
247B	Starr Ridge	5150
	WARNER LAKE	
911A	Camas Creek	5720
	GUANO LAKE	
Nev.	Bald Mountain	6720
972	Guano Creek	6480
	WEST COAST DRAINAGE	
	UMPQUA RIVER	
522	Champion	4500
743	Diamond Lake	5315
726	Gooleway Gap	3000
7215	Gooleway Mountain	3730
742	N.Umpqua near Lake Creek	4215
741	Trap Creek	3800
7217	Whaleback	5140
	ROGUE RIVER	
7216	Althouse	4400
831	Annie Spring	6018
729	Big Red Mountain	6500
722	Billie Creek Divide	6000
725	Fish Lake	4865
726	Goolaway Gap	3000
7215	Goolaway Mountain	3730
727	Grayback Peak	6000
723	Hyatt Prairie Reservoir	4900
7210	Little Red Mountain	6500
7220	Scragg Mountain	6200
7211	Seven Lakes No. 1	6800
7212	Seven Lakes No. 2	6200
7219	Silver Burn	3720
728	Siskiyou Summit	4630
7218	South Fork Canal	3500
7213	Wegner Butte	6900
7217	Whalebeck	5140

February 1, 1946

WATER SUPPLY OUTLOOK

The annual mid-winter snow surveys indicate Oregon's 1946 water supply prospects are likely to be very good. Reservoir storages, with few exceptions, are well above normal for this date. If normal conditions of snow accumulation prevail during the next two months, water supplies will be comparable to those of 1943.

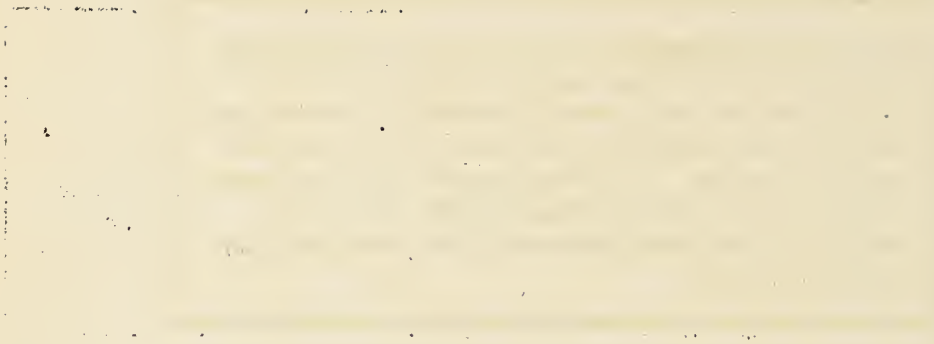
Mountain snow cover, as of February 1, is considerably above average on all snow courses in Oregon. Normal or above-normal additions to the snow-pack during February and March will produce stream flow comparable to 1943 and may be of flood proportions on some streams if the snow water is suddenly released by high temperatures. However, if the February and March snow-fall is deficient, the present snow cover will likely provide an adequate 1946 water supply.

Watershed soils are generally well saturated and not frozen, a condition favoring sustained run-off from the spring snow-pack.

Total water stored in all reservoirs is 46 percent greater than of similar date last year, 6 percent greater than in 1944, 15 percent less than in 1943, and is 15 percent greater than average. More than half of Oregon's reservoirs are half full or better.

Precipitation in Oregon valleys accumulated since October 1 is generally above normal. The Wallowa Mountain area is an exception with precipitation about 92 percent normal for this period.

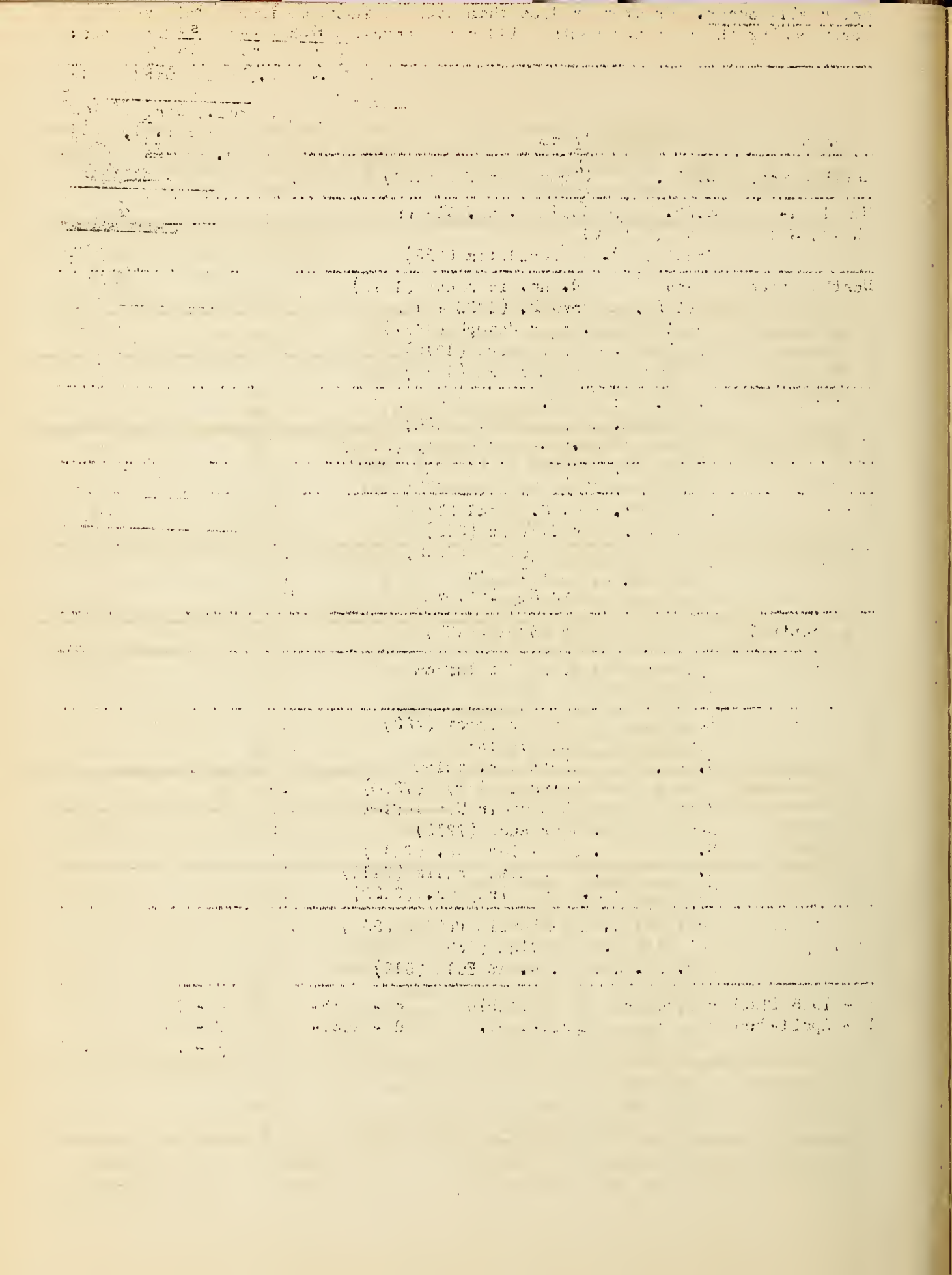
Preliminary forecasts of April-September stream flow, based on existing mountain snow cover, and on the assumption that snow cover increase during February and March will be average, indicate a state-wide run-off of ample proportions.



The following preliminary run-off forecasts are based on present mountain snow cover and on the assumption that average February and March increase of snow cover will occur. Greater or less than average increase in mountain snow cover during the next two months will correspondingly modify these estimates:

Area	Stream	Apr.-Sept., incl., Stream Flow Expectancy as of Feb. 1, 1946 As % of Avg. 1929-44		As % of Last Year
Northcentral	W. Fk. Hood River near Dee (438)	143	c	a
Umatilla-Walla Walla	S.Fk. Walla Walla R. nr. Milton Station (214)	122	f	a
	Umatilla R. at Pendleton (223)	133		a
Northeastern	Grande Ronde R. nr. LaGrande (1816)	122		a
	East Fk. Wallowa R. (1822 + 1823)	140		a
	Hurricane Cr. near Joseph (1814)	134		a
	Lostine R. near Lostine (1810)	128		a
	Bear Creek near Wallowa (1815)	112		a
Eastern	N. Fk. Malheur R. at Beulah (139)	132		a
	Malheur R. near Drewsey (1320)	126		a
	Strawberry Cr.nr.Prairie City (2434)	116	e	a
Harney Basin	Silvies River near Burns (966)	155		a
Central	Tumalo Cr. & C. S. Canal (338a)	122		a
	Squaw Cr. near Sisters (335)	127		a
	Odell Cr. near Crescent (3212)	g		
	Crescent Lake Net Inflow	g		
	Ochoco Reservoir Net Inflow	188		a
Southcentral	Deep Creek above Adel (9127)	121	b	a
Klamath Basin	Upper Klamath Lake Net Inflow	181		173
Southern	Rogue River above Prospect (722)	139		a
	Fourmile Lake Net Inflow	135		a
	N. Fk. Little Butte Cr. below Fish Lake (Natural flow) (7230)	129		a
	Hyatt Prairie Reservoir Net Inflow	149		a
	Applegate R. near Ruch (7212)	162		a
	N. Umpqua R. below Lake Cr. (7419)	117		a
	N. Umpqua R. at Toketee Falls (7414)	121		a
	Clearwater R. above Trap Cr. (7420)	116		a
Willamette Valley	McKenzie R. at McKenzie Bridge (534)	125		a
	McKenzie R. near Vida (535)	130		a
	Mid. Fk. Willam. R. at Eula (512)	g		

a - 1945 Discharge record not available
b - April-June rather than April-Sept.
c - 1933-44
d - 1934-44
e - 1931-44
f - 1932-44
g - Data delayed



COMPARISON OF SNOW COVER AS OF FEBRUARY FIRST WITH THAT OF PREVIOUS YEARS

Snow-stored water now present above 5,000 feet:

As percent of that present one month ago	-- 144
As percent of that present one year ago	-- 305
As percent of that present two years ago	-- 298
As percent of average	-- 178

Snow-stored water now present from 2,000-5,000 feet:

As percent of that present one month ago	-- 166
As percent of that present one year ago	-- 490
As percent of that present two years ago	-- 328
As percent of average	-- 204

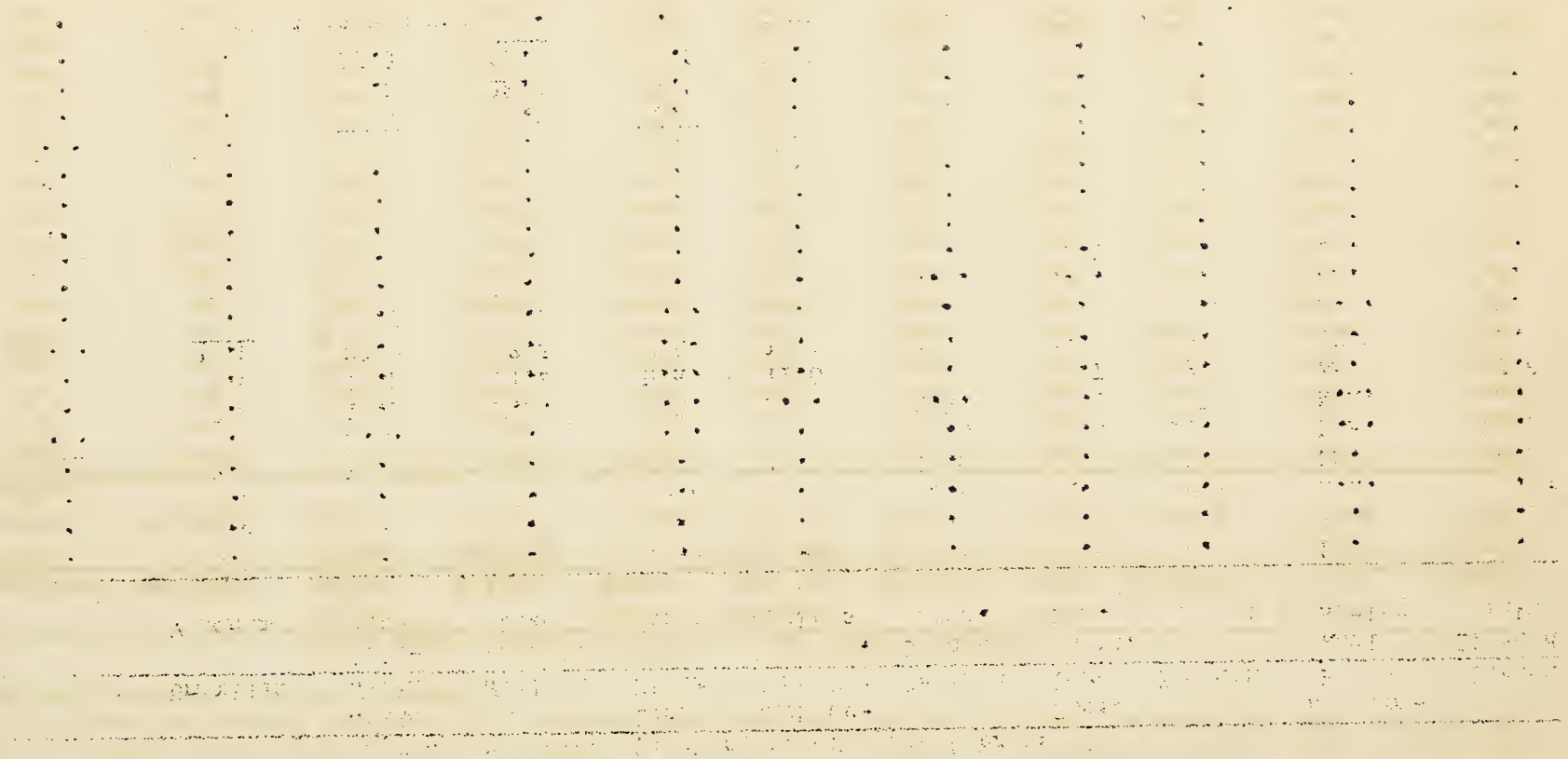
Snow water content on 100 percent of all measured courses is greater than at this time in 1945, and in 92 percent of the comparisons, is greater than on about February 1, 1944. Snow water content on 87 percent of all measured courses is greater than average.

Given below is a tabulation showing inches snow-stored water for the February 1 record period on eleven scattered snow courses of greatest record length. The superior snow pack of February 1, 1946, as compared with that of the same date in most earlier years is evident.

Snow Water Content (Inches) as of About February 1

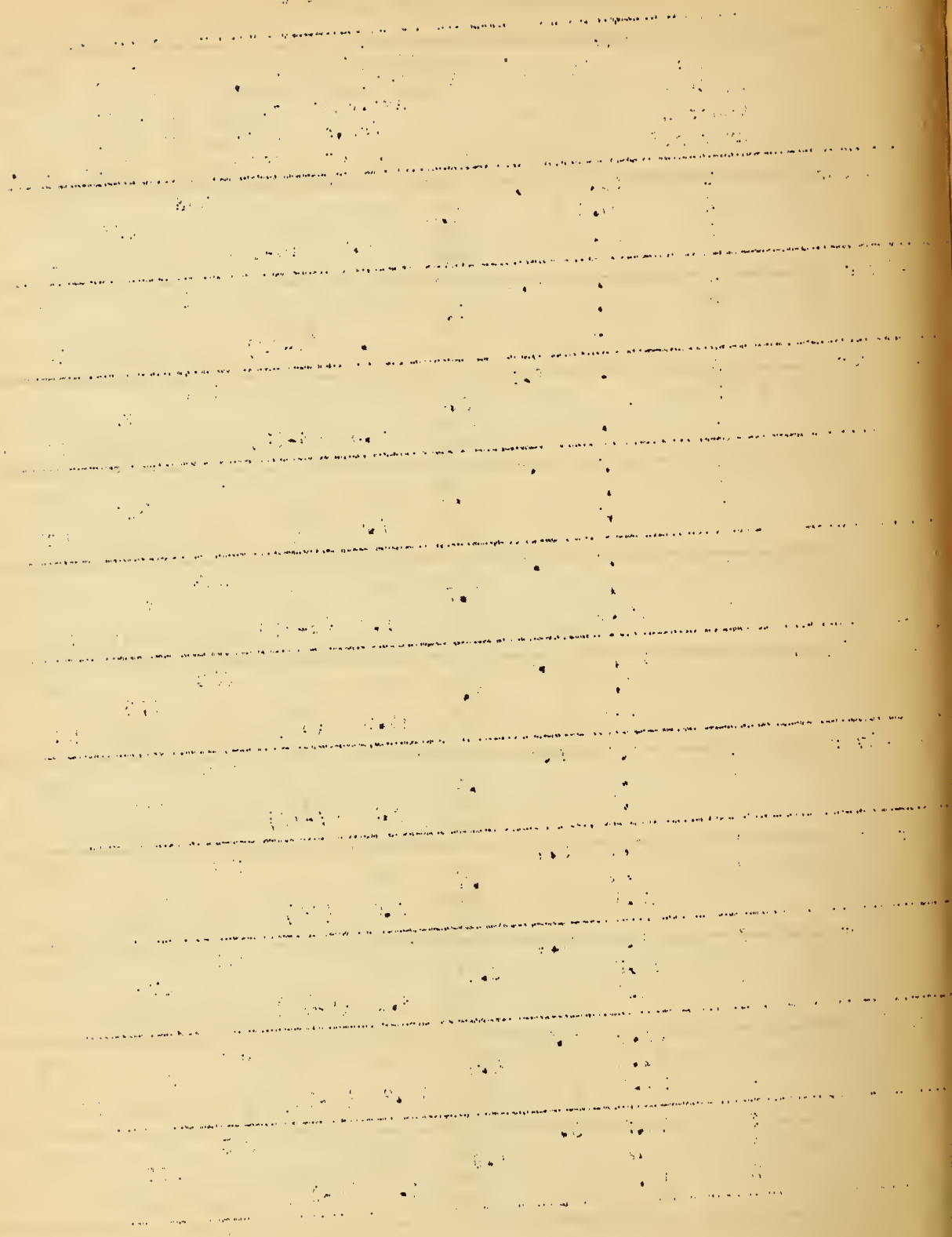
River Basin	Deschutes	Umatilla	Walla Walla	Wallowa	Burnt River	Malheur-John Day	Crooked	Goose Lake	Klamath	Klamath-Rogue	Umpqua
Snow Course / Year	Three Creeks Meadows	Meacham	Toll-gate	Aneroid Lake	Tipton	Blue Mt. Springs	Ochoco Mdws.	Quartz Mtn.	Chemult	Annie Spring	Diamond Lake
1929	11.2	9.2	-	7.7	10.1	-	4.3	4.0	6.5	20.3	8.9
1930	13.1	3.5	-	15.2	3.8	4.4	3.8	6.0	4.6	19.5	5.5
1931	8.1	6.2	14.1	13.0	8.2	3.6	5.6	4.0	6.1	N.R.	8.4*
1932	23.4	9.3	23.7	28.4	8.7	13.7	10.0	6.9	12.8	22.3	26.2
1933	N.R.	5.6	N.R.	26.0	N.R.	13.0	6.5	5.9	11.1	N.R.	27.5
1934	8.5	0.5	12.5	N.R.	N.R.	N.R.	N.R.	1.0	T	N.R.	5.6
1935	15.8	5.6	18.2	21.2	N.R.	11.0	9.4	7.7	8.6	33.4	7.6
1936	N.R.	11.2	27.8	17.3	N.R.	13.4	13.5	11.3	9.4	37.2	12.0
1937	18.5	9.3	16.6	9.3	N.R.	8.2	6.1	4.1	7.0	N.R.	15.6
1938	8.2	2.1	9.7	21.0	4.5	9.0	N.R.	N.R.	4.1	22.8	7.9
1939	10.1	4.0	14.1	13.4	6.8	7.4	5.7	2.2	5.3	26.5	12.2
1940	4.3	2.3	5.9	16.5	3.1	3.6	1.8	T	5.5	20.5	3.1
1941	6.8	4.0	14.1	19.3	8.7	13.4	8.6	5.0	8.1	36.8	10.5
1942	6.6	3.5	7.0	22.4	4.8	6.8	5.9	3.8	6.3	18.1	6.8
1943	N.R.	10.6	28.8	28.6	13.4	23.0	13.7	9.4	20.5	40.8	29.8
1944	4.1	3.1	8.4	12.2	3.8	4.0	2.7	2.3	4.2	14.3	7.4
1945	1.6	4.6	8.2	12.8	8.2	4.9	4.7	4.8	3.7	13.4	4.5
1946	20.0	9.6	27.1	29.1	9.2	14.1	12.8	7.9	13.9	42.2**	26.1

Greatest Feb. 1 water content is underscored. N.R.-No report T - Trace * (Feb.15) ** (Jan.17)



STATUS OF SNOW COVER AS OF FEBRUARY FIRST
Summary of Snow Survey Data
by Watersheds as of About February First

Stream Basin	Number Of Snow Courses Averaged	Average Water Depth in Snow Cover (Inches) 1946	1945	1944	Avg. Past Yrs. of Record	Yrs. of Record	1946 Snow Water Depth (Inches) as Percent of that in 1945	1944	Avg.
Malheur River	2	10.0	3.8				263		
	2	10.0		3.0				333	
	2	10.0			6.9	(10-15)			145
Burnt River	3	9.5	5.5				173		
	3	9.5		3.0				317	
	3	9.5			6.0	(7-12)			158
Powder River	3	15.9	7.1				224		
	2	10.0		3.0				333	
	3	15.9			9.5	(6-12)			167
Pine Creek	1	30.2	9.8				308		
	1	30.2		9.8				308	
	1	30.2			17.6	(8)			172
Grande Ronde River	7	20.6	8.3				248		
	7	17.8		6.7				266	
	8	19.0			11.8	(3-17)			161
Walla Walla River	1	27.1	8.2				330		
	1	27.1		8.4				323	
	1	27.1			14.9	(14)			182
Umatilla River	4	14.3	5.6				255		
	4	14.3		4.4				325	
	4	14.3			8.2	(7-17)			174
Willow Creek	1	12.4	5.4				230		
	1	12.4		3.8				326	
	1	12.4			7.0	(16)			177
John Day River	7	11.2	3.4				329		
	7	11.2		3.4				329	
	7	11.2			6.1	(9-16)			184
Deschutes River	2	31.0	5.3				585		
	3	24.8		6.6				376	
	3	24.8			10.7	(5-14)			232
Crooked River	3	10.2	3.6				283		
	3	10.2		1.9				537	
	3	10.2			4.8	(8-16)			212



(Continued)

Stream Basin	Number Of Snow Courses Averaged	Average Water Depth in Snow Cover (Inches) 1946	1945	1944	Avg. Past Yrs. of Record	Yrs. of Record	1946 Snow Water Depth (Inches) as Percent of that in 1945	1944	Avg.
Sandy River	2	45.4	6.4				711		
	2	45.5		10.0				455	
	2	45.5			16.9	(8)			269
Clackamas River	1	16.1	2.7				596		
	1	16.1		3.7				435	
	1	16.1			7.7	(8)			209
Willamette River	6	20.2	3.6				561		
	6	20.2		4.0				505	
	6	20.2			8.8	(5-8)			230
Harney Basin	4	7.6	2.4				317		
	4	7.6		2.1				362	
	6	6.2			4.0	(4-13)			155
Silver Lake Basin	1	4.9	0.0				-		
	1	4.9		1.6				306	
	1	4.9			2.6	(6)			188
Warner Lake	1	9.3	5.0				186		
	1	9.3		3.8				245	
	1	9.3			6.8	(7)			137
Guano Lake	-	-	-				-		
	-	-		-				-	
	1	4.6			4.6	(4)			100
Umpqua River	4	14.4	2.3				626		
	5	20.6		5.9				349	
	5	20.6			9.2	(7-9)			224
Upper Rogue River	10	13.2	3.9				338		
	11	16.1		6.3				256	
	11	16.1			9.0	(7-14)			179
Applegate River	3	19.1	4.7				406		
	3	19.1		11.0				174	
	3	19.1			13.0	(10)			147
Illinois River	2	10.3	2.0				515		
	2	10.3		6.1				169	
	2	10.3			8.0	(8-10)			129
Klamath Lake Basin	17*	11.7	3.4				344		
	16*	12.0		4.6				261	
	17*	11.7			6.5	(8-19)			180
Goose Lake Basin	3*	9.3	5.0				186		
	3*	9.3		3.1				300	
	3*	9.3			5.6	(7-16)			166

* Including Copco water measurement stations.

STATUS OF RESERVOIR STORAGE AS OF FEBRUARY FIRST

In the following tabulation, water storage in acre feet in important Oregon reservoirs as of about February 1, 1946, is compared with storage as of approximately the same date in 1945, 1944, 1943, and with 10 year average, 1936-45.

Storage Reservoir	Stream Basin	Capacity Acre Ft.	Acre Feet in Storage				
			About 2-1-46	About 2-1-45	About 2-1-44	About 2-1-43	10 Year Average
Agency Valley	Malheur	60,000	38,740	41,880	40,762	24,300	32,631
Antelope	Owyhee	36,550	No report	3,245	0	No report	4,025[h]
Clear Lake	Lost River	440,240[b]	252,250[b]	228,310[b]	293,340[b]	252,030[b]	182,338[b]
Cold Springs	Umatilla	50,000	30,750	14,000	26,000	36,500	25,717[i]
Cottage Grove	Willamette	33,090[b,f]	0	210[b]	0 [c]	0 [c]	1,114[b,j]
Cottonwood	Goose Lake	4,160	No report	355	0	0 [c]	57[k]
Crane Prairie	Deschutes	50,000	36,320	24,240	43,720	30,000	30,006
Crescent Lake	Deschutes	80,000	30,070	31,000	51,790	30,000	32,462
Drew Creek	Goose Lake	62,500	No report	28,500	35,000	42,794	34,427
Emigrant Gap	Rogue	8,200	8,200	1,590	1,534	5,628[c]	4,526
Fern Ridge	Willamette	101,200[b,f]	1,000[b]	1,720[b]	0 [c]	72,550[b]	22,590[b,l]
Fish Lake	Rogue	7,720	3,740	3,196	6,886	4,401	4,368
Fourmile Lake	Klamath[d]	14,000	4,886	6,741	11,516	3,802	7,034
Gerber	Klamath	94,000[b]	31,610[b]	34,220[b]	44,650[b]	39,320[b,c]	39,415[b]
Hyatt Prairie	Klamath[d]	16,000	1,885	1,630	6,513	8,607	5,182
McKay	Umatilla	74,000	36,050	21,440	36,800	51,720[c]	26,369
Ochoco	Crooked	46,000	36,940	1,140	22,980	37,920[c]	11,326
Owyhee	Owyhee	716,000[b]	561,010[b]	403,030[b]	481,330[b]	623,640[b,c]	497,613[b]
Thief Valley	Powder	17,400	No report	8,464	8,954	15,140	10,902[m]
Unity	Burnt	25,260	11,410	10,370	5,232	9,465	9,552[n]
Upper Klamath	Klamath	583,900[g]	394,360[g]	187,800[g]	305,600[g]	466,300[g,c]	353,022[g]
Wallowa Lake	Wallowa	40,920	11,160	9,759	30,820	25,240	18,971
Warmsprings	Malheur	190,000	80,380	35,310	111,760	161,000	81,404
Wickiup	Deschutes	180,000	39,000[a]	45,000	0	4,700	16,567[j]
Willow Creek	Malheur	26,000	No report	10,600[e]	No report	11,600	4,436[p]

a-Estimated
b-Available for use
c-Water being by-passed to provide space for anticipated inflow
d-By ditch to Rogue River side
e-Approximate
f-Storage space reserved for flood control during high water season
g-Based on gage zero elev. of 4135.0
h-Excl. '36, '43
i-1940-45
j-1943-45
k-Excl. '37, '38, '42
l-1942-45
m-1937-45
n-1939-45
p-Excl. '36, '42, '44

IMPORTANT OREGON RESERVOIRS

RESERVOIR NAME	NUMBER
Agency Volley	1354
Antelope	1230
Cleor Lake	823
Cleor Lake	36R1
Cold Springs	22R1
Cottage Grove	5220
Cottonwood	8115
Crane Prairie	3220
Crescent Lake	322
Drew Creek	814
Emigrant Gap	7267
Fern Ridge	5413
Fish Lake	7237
Four Mile Lake	8321
Gerber	8215
Hyatt Prairie	8320
McKay	2231
Ochoco	3420
Owyhee	1234
Rock Creek	36R3
Thief Volley	1514
Thampson Valley	9411
Unity	1415
Upper Klamath Lake	832
Wallawa Lake	186
Warm Springs	1322
Wickiup	3137
Willow Creek No 3	1323

25 0 25 50

SCALE IN MILES

1-27-43

U S DEPT OF AGRICULTURE

SOIL CONSERVATION SERVICE

STATUS OF VALLEY PRECIPITATION AS OF OCTOBER 1 TO DATE

Month	Oct.		Nov.		Dec.		Jan.		Period	
Section	P	D	P	D	P	D	P	D	P	D
S.E.	0.70	-0.01	1.31	+0.14	2.04	+1.01	0.8	-0.5	4.85	+0.64
S.C.	1.24	+0.27	2.53	+0.51	2.93	+0.91	1.7	-0.2	8.40	+1.49
N.C.	0.96	+0.06	2.96	+1.16	3.48	+1.78	1.6	+0.2	9.00	+3.20
Col. Riv.	0.66	-0.34	2.38	+0.69	2.64	+0.91	1.5	-0.2	7.18	+1.06
Wal. Mts.	0.52	-0.92	2.36	+0.48	2.41	+0.54	0.8	-0.6	6.09	-0.50
Blue Mts.	0.72	-0.60	3.01	+0.77	3.04	+0.74	1.5	-0.3	8.27	+0.61
Southern	1.54	-0.38	6.66	+3.43	5.04	+1.20	4.3	+0.8	17.54	+5.05
Willamette	2.13	-1.98	13.99	+6.28	9.55	+1.04	6.7	-1.1	32.37	+4.24
Area	1.06	-0.49	4.40	+1.68	3.89	+1.02	2.4	-0.2	11.71	+1.97

P - Inches precipitation. D - Inches departure from normal.

S.E. - Southeastern Oregon range lands, Harney and Malheur Counties.

S.C. - Southcentral Oregon range lands, Lake County and Klamath County, except the Cascade Mountains.

N.C. - Northcentral Oregon wheat and range lands, Crook, Deschutes, Jefferson, Wheeler and part of Grant Counties.

Col. Riv. - Columbia River area, wheat and range lands, Gilliam, Morrow, Sherman, Wasco and part of Umatilla Counties.

Wal. Mts. - Wallowa Mountain area, forest and range lands, Wallowa and part of Baker County.

Blue Mts. - The Blue Mountain forest and range area, Union and parts of Baker, Grant and Umatilla Counties.

Southern - Southern Oregon irrigated section, Jackson and Josephine Counties.

Willamette - Parts of Polk, Benton, Yamhill, Washington, Lane and all of Linn, Marion, Clackamas and Multnomah Counties.

Note: Data for the last month shown above are preliminary only, as they are based on a few stations only. Data for earlier months have been corrected to include all the stations in Climatological Data for the area.

STREAM BASINS (Primary & Secondary & Snow Courses)	LOCATION Oregon Number	Sec.	Twp.	Range	Elev.	SNOW COVER MEASUREMENTS About Feb. 1, 1946 Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	Average Water Depth (Inches) One Month Ago (1-1-46)	One Year Ago (2-1-45)	Two Years Ago (2-1-44)	Avg. for past yrs. of record	Yrs. of record
UPPER COLUMBIA DRAINAGE													
LOWER SNAKE IN OREGON													
OWYHEE RIVER													
South Mountain No. 2	Idaho	35	7S	5W	6340	Measurement Delayed			9.2	6.3	2.2	7.7	5
MALHEUR RIVER													
Blue Mountain Springs	133	21	15S	35E	5900	1-18	45.2	14.1	11.7	4.9	4.1	9.3	15
Crane Prairie	137	24	16S	34E	5375	1-18	31.8	7.8	-	-	-	4.2	3
Lake Creek	136	10	16S	33½E	5120	1-18	34.3	8.2	-	-	-	5.9	3
Rock Spring	134	23	18S	32E	5100	1-27	27.3	6.0	5.0	2.7	1.8	4.5	10
Stinking Water	135	33	21S	34E	4800	Measurement Delayed			-	2.5	2.2	3.5	8
BURNT RIVER													
Blue Mountain Summit	141	6	12S	36E	5098	1-31	42.4	9.5	6.0	3.4	2.5	5.2	11
Dooley Mountain	156	32	11S	40E	5430	1-30	33.7	9.8	7.5	4.8	2.8	5.8	7
Tipton	142	34	10S	35½E	5100	1-28	41.4	9.2	-	8.2	3.8	7.0	12
POWDER RIVER													
Anthony Lake	155	18	7S	37E	7125	2-2	75.4	27.8	16.2	12.9	-	15.6	6
Bourne	154	33	8S	37E	5800	Measurement Delayed			-	4.0	4.6	9.2	10
Dooley Mountain	156	32	11S	40E	5430	1-30	33.7	9.8	7.5	4.8	2.8	5.8	7
Eilertson Meadows	151B	18	8S	38E	5400	1-22	37.6	10.1	-	3.7	3.2	7.1	12
Gold Center	249	21	9S	36E	5340	Measurement Delayed			-	4.9	4.3	7.0	7
PINE CREEK													
Schneider Meadows	161	35	6S	45E	5400	1-29	95.5	30.2	-	9.8	9.8	17.6	8

STREAM BASINS (Primary & Secondary & Snow Courses)	Oregon Number	LOCATION Sec.	Twp.	Range	Elev.	About Feb. 1, 1946 Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	Average Water Depth (Inches) One Month Ago (1-1-46)	One Year Ago (2-1-45)	Two Years Ago (2-1-44)	Avg. for past yrs. of record	Yrs. of record
GRANDE RONDE RIVER													
Aneroid Lake No. 1	183	16	4S	45E	7480	1-26	84.6	29.1	-	12.8	12.2	17.8	16
Aneroid Lake No. 2	183A	16	4S	45E	7000	1-26	63.0	23.3	-	8.3	9.3	15.4	4
Anthony Lake	155	18	7S	37E	7125	2-2	75.4	27.8	16.2	12.9	-	15.6	6
Beaver Reservoir	188	8	5S	37E	5340	1-29	37.5	8.7	6.0	3.9	3.4	7.7	7
Camp Carson	187	33	6S	36E	5970	1-30	33.5	8.0	-	-	3.5	4.4	3
Meacham	221	24&25	1S	35E	4300	1-29	41.5	9.6	-	4.6	3.1	5.6	17
Moss Spring	186A	28	3S	41E	5850	1-31	71.2	18.7	5.5	7.6	7.0	12.7	8
Tollgate	212	32	4N	38E	5070	1-29	90.8	27.1	-	8.2	8.4	14.9	14
LOWER COLUMBIA DRAINAGE													
WALLA WALLA RIVER													
Tollgate	212	32	4N	38E	5070	1-29	90.8	27.1	-	8.2	8.4	14.9	14
UMATILLA RIVER													
Emigrant Springs	222	29	1N	35E	3925	1-29	36.1	10.2	-	3.5	1.7	5.3	17
Lucky Strike	223	28	3S	32E	5050	1-28	41.2	10.4	-	6.0	4.5	6.8	7
Meacham	221	24&25	1S	35E	4300	1-29	41.5	9.6	-	4.6	3.1	5.6	17
Tollgate	212	32	4N	38E	5070	1-29	90.8	27.1	-	8.2	8.4	14.9	14
WILLOW CREEK													
Arbuckle Mountain	241	33	4S	29E	5400	2-1	48.3	12.4	-	5.4	3.8	7.0	16
JOHN DAY RIVER													
Arbuckle Mountain	241	33	4S	29E	5400	2-1	48.3	12.4	-	5.4	3.8	7.0	16
Beech Creek Summit	246A	4	12S	30E	4800	1-29	20.3	7.4	5.2	1.6	3.2	3.7	9
Blue Mountain Springs	133	21	15S	35E	5900	1-18	45.2	14.1	11.7	4.9	4.1	9.3	15
Blue Mountain Summit	141	6	12S	36E	5098	1-31	42.4	9.5	6.0	3.4	2.5	5.2	11

STREAM BASINS (Primary & Secondary & Snow Courses)	Oregon Number	LOCATION Sec.	Twp.	Range	Elev.	SNOW COVER MEASUREMENTS About Feb. 1, 1946 Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	Average Water Depth (Inches) One Month Ago (1-1-46)	One Year Ago (2-1-45)	Two Years Ago (2-1-44)	Avg. for past yrs. of record	Yrs. of record
JOHN DAY RIVER (Cont'd.)													
Gold Center	249	21	9S	36E	5340	Measurement Delayed			-	4.9	4.3	7.0	7
Izee Summit	964	28	16S	29E	5293	1-28	31.8	10.7	9.6	2.3	3.0	5.2	10
Olive Lake	245	14	9S	33½E	6000	1-30	54.3	16.1	9.7	4.6	4.6	8.9	10
Starr Ridge	247B	20	15S	31E	5150	1-28	24.1	8.0	6.4	1.7	2.4	3.6	10
DESCHUTES RIVER													
Caldwell Ranch	326	30	21S	8E	4400	1-14	39.3	12.5	-	-	3.2	3.8	5
Cascade Summit	321	7	23S	6E	4880	Measurement Delayed			-	8.7	7.3	17.6	15
Crescent Lake	325	11	24S	6E	4760	Measurement Delayed			-	1.9	3.2	7.4	10
Derr	343	14	13S	23E	5670	2-1	37.5	10.5	-	4.2	2.6	5.2	8
Hogg Pass	351	24	13S	7½E	4755	1-31	111.6	42.0	-	9.0	12.4	18.4	8
Marks Creek	344	25	12S	19E	4540	1-30	23.3	7.3	-	1.8	0.3[b]	2.9	8
New Dutchman Flat	324A	21	18S	9E	6400	1-16	120.4	48.0	-	-	-	15.3	1
Ochoco Meadows	341	21	13S	20E	5200	2-1	43.0	12.8	10.5	4.7	2.7	6.4	16
Rock Creek	362	1	4S	10E	4200	1-31	53.4	14.7	-	-	-	-	-
Three Creeks Meadows	331	3	17S	9E	5600	2-3	58.0	20.0	-	1.6	4.1	10.0	14
SANDY RIVER													
Phlox Point-Mt. Hood	452	6	3S	9E	5600	2-1	178.4	63.0	-	10.0	15.0	25.6	8
Still Creek	451	25	3S	8½E	3700	2-4	82.5	28.0	-	2.9	5.0	8.2	8
CLACKAMAS RIVER													
Peavine Ridge	591	14&15	6S	7E	3500	2-5	58.2	16.1	9.8	2.7	3.7	7.7	8

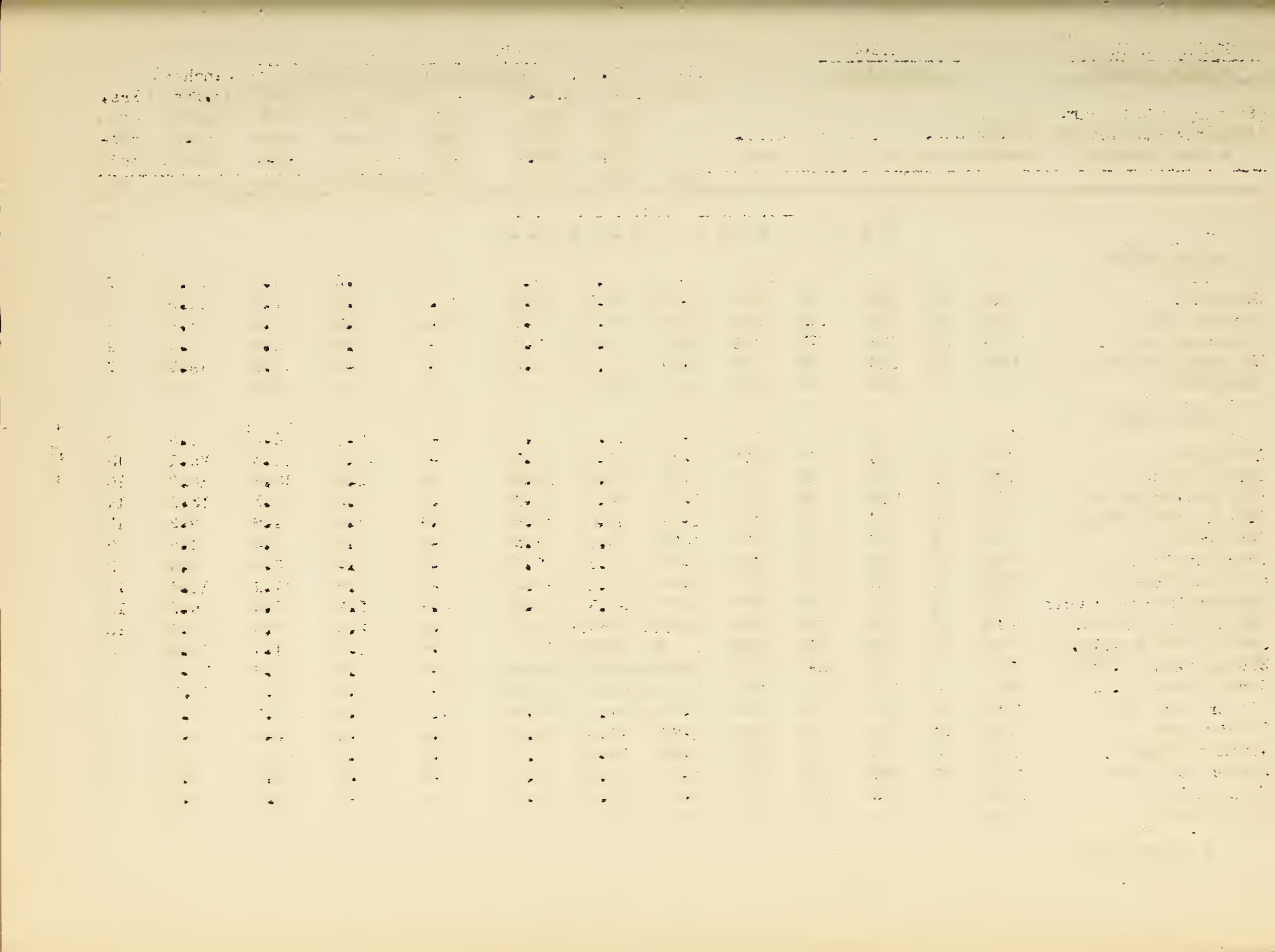
b - Estimated

STREAM BASINS (Primary & Secondary & Snow Courses)	Oregon Number	LOCATION Sec.	Twp.	Range	Elev.	SNOW COVER MEASUREMENTS About Feb. 1, 1946 Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	Average Water Depth (Inches) One Month Ago (1-1-46)	One Year Ago (2-1-45)	Two Years Ago (2-1-44)	Avg. for past yrs. of record	Yrs. of record
WILLAMETTE RIVER													
Breitenbush	551	21	9S	7E	2325	1-31	16.0	4.3	Trace	0.7	0.2[b]	3.7	5
Cascade Summit	321	7	23S	6E	4880	Measurement Delayed			-	8.7	7.3	17.6	15
Champion	522	12	23S	1E	4500	1-31	78.9	28.3	-	3.2	4.4	10.6	7
Hogg Pass	351	24	13S	7½E	4755	1-31	111.6	42.0	24.6	9.0	12.4	18.4	8
McKenzie	531	35	15S	7½E	4800	Measurement Delayed			-	-	11.4	13.8	4
Marion Forks	553	28	11S	7E	2730	1-31	41.1	13.8	8.5	0.6	1.4	5.6	5
Mary's Peak	541	21	12S	7W	3620	1-28	22.8	8.6	-	4.1	2.0	4.2	6
Santiam Junction	552	14	13S	7E	3990	1-31	72.9	24.5	17.0	3.9	3.8	10.4	5
INTERIOR DRAINAGE													
SILVER LAKE													
Silver Creek	942	25&26	29S	13E	4900	1-31	17.3	4.9	-	0.0	1.6	2.6	6
HARNEY BASIN													
Deer Creek	973	17	36S	26E	6670	1-29	21.3	5.9	-	-	-	4.6	4
Hart Mountain	971	1	36S	25E	6350	1-28	3.0	0.9	-	-	-	2.6	4
Idylwild Park	961A	33	20S	31E	5200	1-27	28.8	5.5	5.6	2.8	1.2	3.8	13
Izee Summit	964	28	16S	29E	5293	1-28	31.8	10.7	9.6	2.3	3.0	5.2	10
Rock Spring	134	23	18S	32E	5100	1-27	27.3	6.0	5.0	2.7	1.8	4.5	10
Starr Ridge	247B	20	15S	31E	5150	1-28	24.1	8.0	6.4	1.7	2.4	3.6	10
GUANO LAKE													
Guano Creek	972	13	36S	25E	6480	1-28	15.6	4.6	-	-	-	4.6	4
WARNER LAKE													
Camas Creek	911A	5	39S	21E	5720	1-28	31.6	9.3	-	5.0	3.8	6.8	7

b - Estimated

STREAM BASINS (Primary & Secondary & Snow Courses)	LOCATION Oregon Number	Sec.	Twp.	Range	Elev.	SNOW COVER MEASUREMENTS About Feb. 1, 1946 Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	Average Water Depth (Inches) One Month Ago (1-1-46)	One Year Ago (2-1-45)	Two Years Ago (2-1-44)	Avg. for past yrs. of record	Yrs. of record
WEST COAST DRAINAGE													
UMPQUA RIVER													
Champion	522	12	23S	1E	4500	1-31	78.9	28.3	-	3.2	4.4	10.6	7
Diamond Lake	743	29	27S	6E	5315	1-31	80.7	26.1	18.8	4.5	7.4	10.9	9
Goolaway Gap	726	32	32S	3W	3000	1-28	3.9	1.3	-	0.2	1.3	1.8	9
Goolaway Mountain	7215	30	32S	3W	3730	1-28	9.7	2.1	-	1.4	2.3	4.5	9
Whaleback	7217	3	31S	2E	5140	1-31	108.6	45.3	-	-	13.9	18.3	7
ROGUE RIVER													
Althouse	7216	17	41S	7W	4400	1-31	11.8	2.5	-	0.8	0.6[b]	1.8	8
Annie Spring	831	19	31S	6E	6018	1-17	104.9	42.2	-	13.4	14.3	25.1	13
Big Red Mountain	729	31	40S	1W	6500	2-1	68.4	24.6	-	6.6	12.7	16.0	10
Billie Creek Divide	722	30	36S	5E	6000	1-30	76.1	24.8	17.6	9.5	8.3	13.9	14
Fish Lake	725	3	37S	4E	4865	1-31	47.0	16.8	9.1	3.5	4.6	8.2	12
Goolaway Gap	726	32	32S	3W	3000	1-28	3.9	1.3	-	0.2	1.3	1.8	9
Goolaway Mountain	7215	30	32S	3W	3730	1-28	9.7	2.1	-	1.4	2.3	4.5	9
Grayback Peak	727	9	40S	5W	6000	1-30	58.2	18.1	-	3.2	11.6	14.1	10
Hyatt Prairie Reservoir	723	15	39S	3E	4900	1-29	39.3	11.0	6.1	2.2	6.4	6.2	11
Little Red Mountain	7210	25	40S	2W	6500	Not Measured			-	2.5	9.6	10.5	10
Scragg Mtn. (Calif.)	7220	9	47N	10W	6200	Measurement Delayed			21.3	5.3	11.4	15.4	5
Seven Lakes No. 1	7211	3	34S	5E	6800	Measurement Delayed			-	17.5	20.6	22.2	6
Seven Lakes No. 2	7212	26	33S	5E	6200	Measurement Delayed			-	12.2	13.3	15.2	6
Silver Burn	7219	30	30S	4E	3720	1-31	41.0	11.8	8.2	2.5	5.3	5.7	8
Siskiyou Summit	728	17	40S	2E	4630	1-27	17.0	5.1	3.7	1.2	3.8	4.6	9
South Fork Canal	7218	12	33S	3E	3500	1-30	15.0	2.4	0.0	0.8	Trace	1.5	8
Wagner Butte	7213	1	40S	1W	6900	1-31	44.8	14.6	-	4.3	8.7	9.0	10
Whaleback	7217	3	31S	2E	5140	1-31	108.6	45.3	-	-	13.9	18.3	7

b - Estimated



STREAM BASINS (Primary & Secondary & Snow Courses)	LOCATION Oregon Number	Sec.	Twp.	Range	Elev.	SNOW COVER MEASUREMENTS About Feb. 1, 1946 Date	Avg. Snow Depth (In.)	Avg. Water Depth (In.)	Average Water Depth (Inches) One Month Ago (1-1-46)	One Year Ago (2-1-45)	Two Years Ago (2-1-44)	Avg. for past yrs. of record	Yrs. of record
KLAMATH LAKE BASIN													
Annie Spring	831	19	31S	6E	6018	1-17	104.9	42.2	-	13.4	14.3	25.1	13
Beatty 2/		22	36S	12E	4300	1-31	2.8	0.3	0.0	0.0	0.0	0.8	18
Billie Creek Divide	722	30	36S	5E	6000	1-30	76.1	24.8	17.6	9.5	8.3	13.9	14
Chemult No. 1	834	21	27S	8E	4760	1-31	49.4	13.9	9.9	3.7	4.2	7.2	9
Chiloquin 2/		34	34S	7E	4187	1-31	6.0	b 1.0	0.0	0.0	2.4	2.2	16
Crowder Flat (Calif.)		30	47N	11E	5200	Measurement Delayed			-	-	1.6	2.8	6
Crystal 2/		26	34S	6E	4200	1-31	31.0	10.8	6.8	3.2	4.4	6.0	16
Fort Klamath 2/		22	33S	7½E	4150	1-31	7.8	1.8	0.2	1.2	3.6	3.9	19
Hyatt Prairie Reservoir	723	15	39S	3E	4900	1-29	39.3	11.0	6.1	2.2	6.4	6.2	11
Kirk 2/		1	33S	7E	4533	1-31	26.2	11.0	6.2	0.8	4.1	5.0	19
Lake of the Woods No.1	835	11	37S	5E	4960	1-31	36.7	11.0	9.3	3.3	5.5	4.9	9
Pelican 2/		10	36S	6E	4200	1-31	13.0	3.5	1.4	1.1	3.3	3.7	19
Quartz Mountain	811	2	38S	16E	5320	1-29	28.9	7.9	4.6	4.8	2.3	4.9	16
Quartz Mountain 2/		33	37S	16E	5504	1-31	36.0	10.8	5.9	5.2	3.3	5.1	16
Richardson Ranch 2/		22	35S	14E	4800	1-31	10.2	1.2	0.0	0.2	1.5	2.0	19
Seven Lakes No. 1	7211	3	34S	5E	6800	Measurement Delayed			-	17.5	20.6	22.2	6
Seven Lakes No. 2	7212	26	33S	5E	6200	Measurement Delayed			-	12.2	13.3	15.2	6
Sun Mountain	836	22	32S	7½E	5350	1-31	87.6	33.0	26.5	7.6	8.2	14.6	8
Taylor Butte	842	16	33S	11E	5100	1-30	26.8	8.4	-	1.5	2.3	3.2	9
Yamsey 2/		7	31S	11E	4600	1-31	20.0	7.0	3.8	0.6	-	1.8	15
GOOSE LAKE BASIN													
Camas Creek	911A	5	39S	21E	5720	1-28	31.6	9.3	-	5.0	3.8	6.8	7
Quartz Mountain	811	2	38S	16E	5320	1-29	28.9	7.9	4.6	4.8	2.3	4.9	16
Quartz Mountain 2/		33	37S	16E	5504	1-31	36.0	10.8	5.9	5.2	3.3	5.1	16

b - Estimated

1/ The following organizations cooperate in the Oregon snow survey work:

STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon Agricultural Experiment Station
- Oregon State Engineer and corps of State Watermasters
- Oregon State Highway Engineers

FEDERAL

- Department of Agriculture
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - Weather Bureau
- Department of the Interior
  - Bonneville Power Administration
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
  - Indian Service
  - National Park Service
- War Department
  - Army Engineer Corps

PUBLIC UTILITIES

- Eastern Oregon Light and Power Company
- Portland General Electric Company
- The California Oregon Power Company

MUNICIPALITIES

- City of Corvallis
- City of LaGrande
- City of The Dalles

IRRIGATION DISTRICTS

- Associated Ditch Companies
- Central Oregon Irrigation District
- Deschutes County Municipal Improvement District
- Grants Pass Irrigation District
- Jordan Valley Irrigation District
- Lakeview Water Users Incorporated
- Medford Irrigation District
- Ochoco Irrigation District
- Rogue River Irrigation District
- Talent Irrigation District
- Vale-Oregon Irrigation District
- Warmsprings Irrigation District

PRIVATE CORPORATIONS

- Amalgamated Sugar Company

2/ Water content determined by melting a measured sample. (The California Oregon Power Company's station)